

1. A data searching system comprising:

5 an address pointer table for storing location information indicating an entry address of each piece of data stored in the search table and/or relationship information among entry addresses of pieces of data stored in the search table.

2. The data searching system according to claim 1,
10 wherein the address pointer table comprises a plurality of memory
blocks each having a fixed length on a recording medium, wherein
the memory blocks are located at consecutive addresses.

wherein each of the memory blocks comprises:
a first area for storing an entry address indicating
15 a location of a corresponding piece of data stored in the search
table: and

a second area for storing one of a next block address and a bottom-indicating flag, the next block address indicating an address of a memory block storing data following the
20 corresponding piece of data, and the bottom-indicating flag indicating that a current memory block is a bottom of a list.

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3. The data searching system according to claim 1,
further comprising:

a controller controlling such that the search table
is searched for a desired piece of data before the database and,
5 if a hit is found in the search table, then a found piece of
data is used as a search result, and if no hit is found in the
search table, then the database is searched for the desired piece
of data and a found piece of data is used as a search result
and is registered into the search table, wherein a piece of data
10 with low retrieved frequency is deleted from the search table
according to a predetermined condition and all linked memory
blocks related to the deleted piece of data are released into
available memory blocks.

4. A packet processing system comprising:
15 a microprocessor;
a routing table;
a memory storing a search table which is used to
increase in search speed for packet forwarding; and
an address pointer table for storing location
20 information indicating an entry address of each piece of data
stored in the search table and/or relationship information among
entry addresses of pieces of data stored in the search table.

5. A packet processing system comprising:
a microprocessor;

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a routing table;

a searcher having a search memory connected thereto,

wherein the search memory stores a search table which is used

to increase in search speed for packet forwarding; and

5 an address pointer table for storing location information indicating an entry address of each piece of data stored in the search table and/or relationship information among entry addresses of pieces of data stored in the search table.

6. The packet processing system according to claim 5,
10 wherein the address pointer table is provided in a main memory
of the microprocessor.

7. The packet processing system according to claim 5, wherein the address pointer table is provided in the search memory.

15 8. The packet processing system according to claim 5,
wherein the address pointer table comprises a plurality of memory
blocks each having a fixed length on a recording medium, wherein
the memory blocks are located at consecutive addresses,

wherein each of the memory blocks comprises:

20 a first area for storing an entry address indicating
a location of a corresponding piece of data stored in the search
table; and

a second area for storing one of a next block address

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Parameter	Value	Unit
Length (mm)	100	mm
Weight (g)	10	g
Age (days)	30	days
Sex	Male	
Genotype	WT	
Environment	Standard	
Food intake (g/day)	1.5	g/day
Water intake (ml/day)	2.0	ml/day
Urine output (ml/day)	1.0	ml/day
Blood glucose (mg/dl)	100	mg/dl
Blood insulin (mU/L)	1.0	mU/L
HbA1c (%)	5.0	%
Plasma glucose (mg/dl)	100	mg/dl
Plasma insulin (mU/L)	1.0	mU/L
Plasma C-peptide (pmol/L)	1.0	pmol/L
Plasma proinsulin (pmol/L)	1.0	pmol/L
Plasma proglucagon (pmol/L)	1.0	pmol/L
Plasma proPYY (pmol/L)	1.0	pmol/L
Plasma proNPY (pmol/L)	1.0	pmol/L
Plasma proMCH (pmol/L)	1.0	pmol/L
Plasma proGHRH (pmol/L)	1.0	pmol/L
Plasma proTRH (pmol/L)	1.0	pmol/L
Plasma proCRH (pmol/L)	1.0	pmol/L
Plasma proAVP (pmol/L)	1.0	pmol/L
Plasma proADH (pmol/L)	1.0	pmol/L
Plasma proGIP (pmol/L)	1.0	pmol/L
Plasma proGLP-1 (pmol/L)	1.0	pmol/L
Plasma proPACAP (pmol/L)	1.0	pmol/L
Plasma proVIP (pmol/L)	1.0	pmol/L
Plasma proSST (pmol/L)	1.0	pmol/L
Plasma proCCK (pmol/L)	1.0	pmol/L
Plasma proMCH (pmol/L)	1.0	pmol/L
Plasma proGHRH (pmol/L)	1.0	pmol/L
Plasma proTRH (pmol/L)	1.0	pmol/L
Plasma proCRH (pmol/L)	1.0	pmol/L
Plasma proAVP (pmol/L)	1.0	pmol/L
Plasma proADH (pmol/L)	1.0	pmol/L
Plasma proGIP (pmol/L)	1.0	pmol/L
Plasma proGLP-1 (pmol/L)	1.0	pmol/L
Plasma proPACAP (pmol/L)	1.0	pmol/L
Plasma proVIP (pmol/L)	1.0	pmol/L
Plasma proSST (pmol/L)	1.0	pmol/L
Plasma proCCK (pmol/L)	1.0	pmol/L

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a routing table;

10 wherein the search memory stores a search table which is used
to increase in search speed for packet forwarding; and

15 addresses of pieces of data stored in the search table,

a) when the routing table has been updated,

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b) changing the entry and related entries so as to be consistent with the routing table.

10. A system comprising:

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a first memory for retrievably storing a plurality
of entries:

a second memory for storing a copy of an entry that has been retrieved from the first memory to retrievably store a plurality of retrieved entries;

a third memory for storing a list of retrieved entries which are linked from a leading one to a bottom one; and

a data controller for accessing a desired retrieved
10 entry by referring to the list stored in the third memory.

11. The system according to claim 10, wherein the data controller processes the desired retrieved entry so as to be consistent with a corresponding entry stored in the first memory when the corresponding entry has been processed.

12. The system according to claim 10, wherein each of the entries stored in the first memory has a first indicator and a second indicator, the first indicator indicating which one of a single entry and an aggregated entry the entry relates to, wherein the aggregated entry has a plurality of single entries belonging thereto, and the second indicator indicating a leading address of the list in the third memory.

13. The system according to claim 10, wherein the list of retrieved entries comprises a plurality of memory blocks each

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corresponding to the retrieved entries, each of the memory blocks comprising an address of a corresponding retrieved entry in the second memory and a next pointer indicating one of an address of a next memory block following the memory block and an address
5 of the memory block itself.

14. The system according to claim 12, wherein, when an aggregated entry stored in the first memory is designated, the data controller accesses the third memory depending on the second indicator of the aggregated entry to trace the list of single
10 entries related to the aggregated entry so as to access the single entries related to the aggregated entry.

15. The system according to claim 14, wherein, when contents of the first memory have been updated, the data controller processes the single entries related to the
15 aggregated entry so as to be consistent with the contents of the first memory.

16. A packet switching system comprising:
a routing table for retrievably storing a plurality of routing entries;
20 a flow table for storing a copy of a routing entry indicating a packet flow that has been retrieved from the routing table to retrievably store a plurality of retrieved packet flows;
an address pointer table for storing a list of

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retrieved packet flows which are linked from a leading one to a bottom one:

a search processor for accessing a desired retrieved packet flow in the flow table by referring to the list stored in the address pointer table; and

a microprocessor performing a packet routing control.

17. The packet switching system according to claim 16, wherein, when a routing entry has been designated to be processed according to predetermined routing processing, the search processor processes a corresponding retrieved packet flow in the flow table so as to be consistent with the designated routing entry stored in the routing table.

18. The packet switching system according to claim 16, wherein each of the routing entries stored in the routing table has a first indicator and a second indicator, the first indicator indicating which one of a single packet flow and an aggregated packet flow the routing entry relates to, wherein the aggregated packet flow has a plurality of single packet flows belonging thereto, and the second indicator indicating a leading address of the list in the address pointer table.

19. The packet switching system according to claim 16, wherein the list of retrieved packet flows comprises a plurality

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5 following the memory block and an address of the memory block
itself.

10 pointer table depending on the second indicator of the aggregated routing entry to trace the list of single packet flows related to the aggregated routing entry so as to access the single packet flows related to the aggregated routing entry.

15 wherein the search processor processes the single packet flows
related to the aggregated routing entry so as to be consistent
with the routing table when the routing table has been updated.

a) retrievably storing a plurality of routing
20 entries in a routing table;

b) storing a copy of a routing entry indicating a packet flow that has been retrieved from the routing table to retrievably store a plurality of retrieved packet flows in a

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c) storing a list of retrieved packet flows which are linked from a leading one to a bottom one in an address pointer table; and

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when a packet flow corresponding to a received packet fails to be found in the search table, searching the routing table for the packet flow;

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when the found packet flow is the micro flow,
searching the search table for a bottom retrieved packet flow
of the list corresponding to the aggregated flow;

when the found packet flow is not the micro flow,
storing an address of the found packet flow in the search table
into a corresponding routing entry in the routing table.

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24. The packet switching method according to claim 22, wherein the step (d) comprises the steps of:

when an aggregated routing entry has been designated to be deleted, deleting each of the retrieved packet flows included in a list related to the aggregated routing entry from the address pointer table until finding a bottom retrieved packet flow of the list;

releasing a chain of the retrieved packet flows
formed in the address pointer table to make them available;

10 deleting a retrieved packet flow corresponding to
the aggregated routing entry from the flow table; and

deleting the aggregated routing entry from the routing table.